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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/543,026	07/21/2005	Emmanuel Legrand	047578/294907	9198

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EXAMINER	
ALIE, GHASSEM	
ART UNIT	**PAPER NUMBER**
3724	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/543,026	LEGRAND, EMMANUEL	
	Examiner	Art Unit	
	GHASSEM ALIE	3724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11/03/08*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12,14 and 24-29* is/are pending in the application.

4a) Of the above claim(s) *25-29* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12, 14 and 24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 December 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/19/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/03/08.

Election/Restrictions

2. Newly submitted claims 25-29 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: claim 12 which have originally presented and examined and newly submitted claims 25-29 are related as subcombinations disclosed as usable together in a single combination.

I. Claim 12, drawn to a cutting head including two parts assembled to form together a string passage way and a curved bearing zone.

II. Claim 25, drawn to a cutting head including a cutting string having a generally square cross-section and a curved bearing zone presents a V-shaped profile.

III. Claim 26, drawn to a cutting head including a string outlet region which is spaced farther inwardly from a peripheral region of the head.

VI. Claim 27, drawn to a cutting head a passageway having an axis that is inclined relative to a direction perpendicular to a peripheral region of the head.

V. Claims 28-29, drawn to a cutting head including s string passageway

presenting a recessed profile that is identical to the profile of the curved bearing zone, and the height of the curved bearing zone is equal to the height of the string passageway.

The inventions are distinct, each from the other because of the following reasons:

3. Inventions I-V are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, e.g., subcombination I has a separate utility such as it could be used without the above-mentioned features set forth in inventions II-V. Conversely, each one of the subcombinations II-V has a separate utility such as it could be used without the above-mentioned features set forth in invention I. See MPEP § 806.05(d).

The examiner has required restriction between subcombinations usable together. Where applicant elects a subcombination and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

4. Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and examination burden if restriction were not required because one or more of the following reasons apply:

(a) the inventions have acquired a separate status in the art in view of their different classification;

(b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;

(c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);

(d) the prior art applicable to one invention would not likely be applicable to another invention;

(e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 25-29 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-5, 9-12, 14 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Rouse (4,756,146). Regarding claim 1, Rouse teaches a cutting head 10 including a passageway 14 for a cutting string 2 extending along an axis that is offset from an axis of rotation 9 of the cutting head and at least one curved bearing zone 101 extending between a string outlet region 100 of the passageway and a peripheral region 102 of the head. It should be noted that the string outlet region could be defined by the mid-section of the passage, and the curved bearing region could be considered as the region between the string outlet region to the periphery region of the head as show in Fig. 1 below. It should also be noted that the at least portion of the string, e.g. the bottom portion of the string in the passageway, is extended along an axis which is off set from the rotational axis 9 of the cutting head. Rouse also teaches that a surface of the curved bearing zone presents a recessed profile 46 which is suited to the cross-section of the cutting string 2, in order to guide the cutting string in the recess when the string flexes in a direction opposite to the rotation of the head to rest against the curved bearing zone.

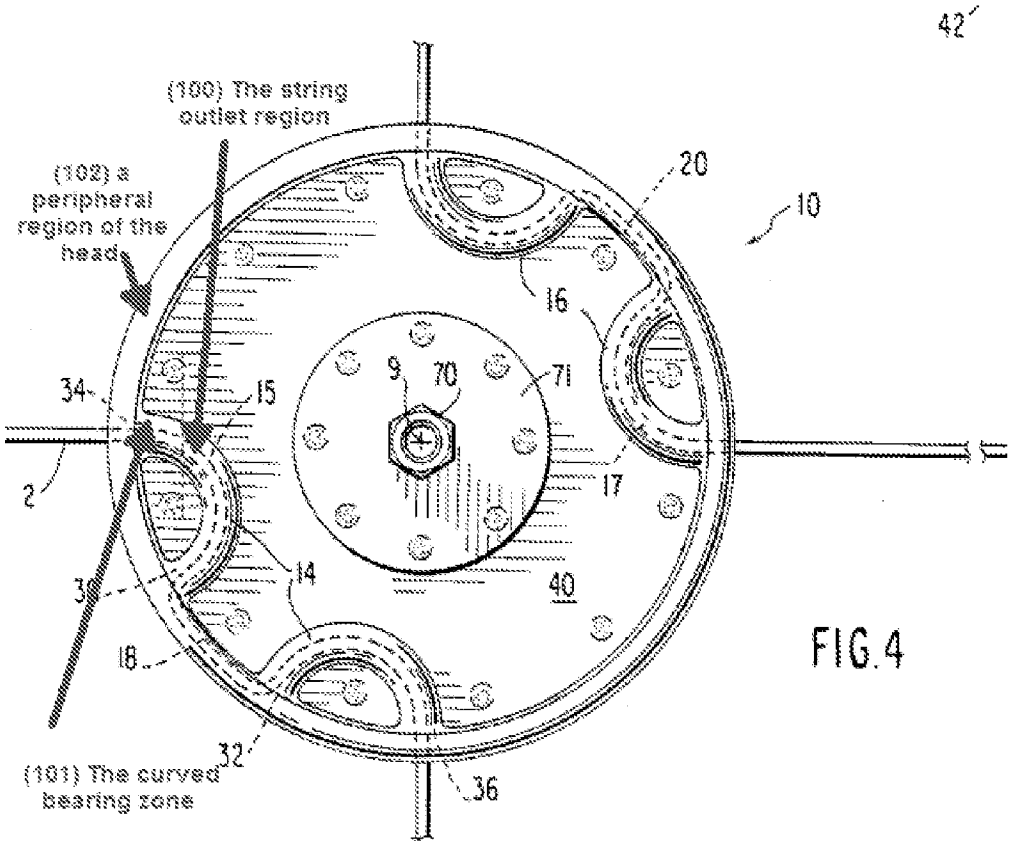

FIG.4

Regarding claim 2, Rouse teaches everything noted above including that the recess 46 formed in the curved bearing zone joins the string passageway in a substantially continuously manner.

Regarding claim 3, Rouse teaches everything noted above including that the curved bearing zone is situated on a widening of the string passageway in the vicinity of a string outlet. It should be noted that the curved bearing zone is located or situated also in the widening region of the passageway. See Fig. 4 above.

Regarding claim 4, Rouse teaches everything noted above including that the profile of the surface of the curved bearing zone is constant.

Regarding claim 5, Rouse teaches everything noted above including that the string passageway 14 is disposed so as to maintain the cutting string in a given orientation.

Regarding claim 9, Rouse teaches everything noted above including that the curved bearing zone joins the peripheral region of the head substantially tangentially.

Regarding claim 10, Rouse teaches everything noted above including a secondary curved bearing zone is provided on the side of the string passageway opposite the curved bearing zone with recessed profile, and the secondary curved bearing zone also presents a recessed profile. It should be noted that the secondary curved bearing zone is located opposite the first curved bearing zone and has a recessed profile.

Regarding claim 11, Rouse teaches everything noted above including that the cutting string has a cross-section which is symmetrical in relation to an axial mid-plane, and the recessed profiles of the two curved bearing zones are identical.

Regarding claims 12 and 14, Rouse teaches everything noted above including that the recess 46 of the curved bearing zone is formed in the region where two parts assembled to form together the string passageway and the curved bearing zone.

Regarding claim 24, Rouse teaches everything noted above including that the passageway is capable of accommodating also a non-circular cross section, such as a string having a non-circular cross-section in Jones et al. (5,048,278. It should be noted that the profile of the curved bearing zone also suits a non-circular cross-section in Jones. Claim 24 does not claim the combination of a string and cutting head. The cutting head in Rouse should only be capable of receiving a cutting string

with a non-circular cross-section. In other words, the cutting string is not positively recited in the claims.

7. Claims 1-11 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Jones et al. (5,048,278), hereinafter Jones. Regarding claim 1, Jones teaches a cutting head 1"R" including a passageway 12 for a cutting string 10 extending along an axis that is offset from an axis of rotation of the cutting head and at least one curved bearing zone 55 extending between a string outlet region 52, 54 of the passageway 12 and a peripheral region 24 of the head. It should be noted that the cutting string is offset from the axis of rotation of the head by having ends 68, 70 positioned at different levels with respect to the center of the head 2. In addition, at cutting string is extends on a horizontal axis that is offset from the axis of rotation of the head by not intersecting the axis of rotation of the head. It should also be noted that the bearing zone 55 is located between an outlet 52, 55 of the passageway 12 and the peripheral region of the rim 6. Jones also teaches that a surface of the curved bearing zone presents a recessed profile which is suited to the cross-section of the cutting string 10, in order to guide the cutting string in the recess when the string flexes in a direction opposite to the rotation of the head to rest against the curved bearing zone. See Figs. 5-8 and col. 3, lines 31-58 and col. 4, lines 1-62 in Jones. It should be noted that the convex curve surface of the bearing zone crate a recessed profile that is suited for supporting the cutting string when unsupported portion 68, 70 of the cutting string 10 bents backwardly against the surface of the bearing zone 55. See Fig. 6 in Jones.

Regarding claim 2, Jones teaches everything noted above including that the recess formed in the curved bearing zone joins the string passageway in a substantially continuously manner.

Regarding claim 3, Jones teaches everything noted above including that the curved bearing zone 55 is situated on a widening of the string passageway in the vicinity of a string outlet. It should be noted that the curved bearing zone is located or situated also in the widening region of the passageway.

Regarding claim 4, Jones teaches everything noted above including that the profile of the surface of the curved bearing zone is constant.

Regarding claim 5, Jones teaches everything noted above including that the string passageway 12 is disposed so as to maintain the cutting string 10 in a given orientation. See col. 4, lines 10-14 in Jones.

Regarding claims 6-8, Jones teaches everything noted above including that the string has a polygonal cross-section, and the string edge situated at the level of a trailing edge of the string; the recess profile is V-shaped, as clearly shown in Fig. 6; and the string possesses a cutting edge 60 at the level of a leading edge of the string.

Regarding claim 9, Jones teaches everything noted above including that the curved bearing zone 55 joins the peripheral region 24 of the head substantially tangentially.

Regarding claim 10, Jones teaches everything noted above including a secondary curved bearing zone is provided on the side of the string passageway opposite the curved bearing zone with recessed profile, and the secondary curved bearing zone also presents a recessed profile. It should be noted that the secondary

curved bearing zone 55 is located opposite the first curved bearing zone 55 on a location to the side of the first curved bearing zone.

Regarding claim 11, Jones teaches everything noted above including that the cutting string 10 has a cross-section which is symmetrical in relation to an axial mid-plane, and the recessed profiles of the two curved bearing zones 55 are identical.

Regarding claim 24, Jones teaches everything noted above including that the cutting string 10 has a non-circular cross-section.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

To the degree that it could be argued that the recessed profile presented by the bearing zone in Rouse is not suited for a non-circular string; alternatively claim 24 is rejected as below.

9. Claims 6-8 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rouse in view of Jones et al. (5,048,278), hereinafter Jones. Regarding claim 6-7 and 24, Rouse teaches everything noted above except that the string has polygonal cross-section, or non-circular cross section, with a ridge situated at the level of its trailing edge. However, the use of a string having a polygonal cross-section disposed in a recess complementary to the shape of the string is well known in the art such as taught by Jones. Jones teaches a string 10 has a polygonal cross-section with a ridge situated at the level of its trailing edge. Jones also teaches that the complementary

recess has a V shape. It would have been obvious to a person of ordinary skill in the art to provide Rouse's cutting head with the string and the recess, as taught by Jones, in order accommodate a polygonal shaped string in the cutting head.

10. Claims 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones in view of Rouse. Regarding claim 12 and 14, Jones teaches everything noted above except that recess of the curved bearing zone 55 is formed in the region where two parts assembled to form together the string passageway and the curved bearing zone. However, Rouse teaches a recess 46 of a curved bearing zone which is formed in the region where two parts assembled to form together the string passageway and the curved bearing zone. See Fig. 1 above. It would have been obvious to a person of ordinary skill in the art to form the bearing zone and the passage of Jones' cutting head from two parts, as taught by Rouse, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman, 168 USPQ 177, 179.*

Response to Amendment

11. Applicant's arguments filed on 11/03/08 have been fully considered but they are not persuasive. Applicant's argument with respect to the restriction of claims 15-23 as being directed to an invention that is independent form the invention that originally claimed and examined is moot, since claims 15-23 have been cancelled.

Applicant's argument that that Rouse does not teach "at least one curved bearing zone extending between a string outlet region of said passageway and a peripheral region of the head" is not persuasive. As stated above, Rouse teaches at least one curved bearing zone 101 extending between a string outlet region 100 of the

passageway and a peripheral region 102 of the head. It should be noted that the string outlet region could be defined by the mid-section of the passage, and the curved bearing region could be considered as the region between the string outlet region to the periphery region of the head as show in Fig. 1 above.

Applicant asserts that the periphery region of the head presents a V-shaped recessed profile. Applicant's argues that Rouse does not disclose a recessed profile that is suited to the cross-section of the cutting string. However, claim 1 and 24 do not cal for a peripheral region of the head having a recessed profile. Claim s 1 and 24 recite, "wherein a surface of the curved bearing zone presents a recessed profile which is suited to the cross-section of the cutting string." In this case, the recessed profile of the curved bearing zone as defined as an area or a zone between the string outlet region and the passageway, as shown in Fig. 4 above, is circular and suited to the cross-section of the cutting string which is also circular. Furthermore, even a V-shaped recess is reasonably suited to a circular cross-section. The claims do not define what the scope of the term "suited to." In other words, it is not clear to what degree the recessed profile should look like to be considered as a suited recessed for the cross-section of the cutting string. Claims 1 and 24 do not recite the shape or the profile of the recess, or do not cal for a recessed that has identical cross-section as the cross-section of the cutting string.

Applicant's argument that the passageways of Rouse are aligned with the central axis 9 and are not thus offset from the axis is not persuasive, The passageways are offset from the central axis 9 since they are not intersection the central axis or they are not located right under the axis of rotation of the head, such as the

passageway of the cutting head in Moore et al. (6,401,344). Claim 1 does not clearly define how the passageway is offset with respect to the axis of rotation of the cutting head.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yates et al. (5,987,756) and Moore et al. (6,401,344) teach a cutting head for a brush cutter.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ghassem Alie whose telephone number is (571) 272-4501. The examiner can normally be reached on Mon-Fri 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley reached on (571) 272-4502. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, SEE http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the

automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ghassem Alie/

Primary Examiner, Art Unit 3724

January 14, 2009